



## Solar + Battery Investment

Return on Investment Analysis

Prepared for **Sample Customer**

Sample Service Address, Ontario | Meter #SAMPLE-0000 | Sample Date

**\$9,936/yr**

CURRENT TOU BILL

**\$8,357/yr**

ANNUAL SAVING

Battery Option B recommended

**9.9 yrs**

FASTEST PAYBACK

Battery Option A (after CCA)

**\$156,482**

BEST 25-YR NET

Battery Option B (after CCA)

### SYSTEM SPECIFICATION (COMMON TO ALL OPTIONS)

Solar Array	64x Premium Solar Module (620W)
Inverter	Hybrid Inverter ABC (30 kW 3-Phase)
DC Capacity	39.68 kW DC
Annual Production	49,080 kWh/yr
Annual Usage	68,601 kWh/yr
Solar Offset	72%
Rate Plan	ULO (Ultra-Low Overnight)
LDC	Local Utility — R2 Medium Year-Round



SITE AERIAL VIEW

### BATTERY CONFIGURATION COMPARISON

	Option A (40) BEST VALUE	Option B (60) RECOMMENDED	2x Option A	2x Option B	Option C (210)
Battery	Battery Model A	Battery Model B	2x Battery Model A	2x Battery Model B	Battery Model C
Total / Usable (kWh)	40 / 32	60 / 48	80 / 64	120 / 96	209 / 167
Dispatch Rate (kWh/hr)	6.4	9.6	12.8	19.2	33.9
Gross Cost (incl HST)	\$194,964	\$221,997	\$250,237	\$304,303	\$300,956
ITC Credit (30%)	\$51,760	\$58,937	\$66,435	\$80,789	\$79,900
HST Reclaim	\$22,429	\$25,539	\$28,788	\$35,008	\$34,623
Net System Cost	\$120,775	\$137,521	\$155,014	\$188,506	\$186,433
Annual Net Bill	\$2,233	\$1,579	\$1,209	\$820	\$820
Annual Saving	\$7,703	\$8,357	\$8,727	\$9,116	\$9,116
Simple Payback	10.3 yrs	10.8 yrs	11.5 yrs	13.1 yrs	13.0 yrs
25-Year Savings	\$262,607	\$284,902	\$297,516	\$310,778	\$310,778
25-Year Net Benefit	\$141,832	\$147,381	\$142,502	\$122,272	\$124,345
25-Year ROI	117%	107%	92%	65%	67%

#### CREDIT EXPIRY IMPACT (OEB 12-MONTH RULE)

\*Savings vary by battery size — larger batteries generate more export credits, reducing winter bills. See Battery Sizing page for monthly breakdown. **Best Value:** Option B (60) (122% ROI, 10.4 yr payback after CCA, highest 25-yr net) | **Zero Winter Bills:** 2x Option B eliminates all winter shortfall.



# HONEY BEE SOLAR

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## Visual Comparison & Monthly Savings

### NET SYSTEM COST BY OPTION



### ANNUAL SAVING VS TOU BASELINE (\$9,936/YR)



### ESCALATED PAYBACK PERIOD (YEARS) \*LOWER IS BETTER



### MONTHLY BILL COMPARISON — CURRENT TOU VS ULO + SOLAR + BATTERY (OPTION B)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL
<b>Current</b>	\$863	\$825	\$816	\$850	\$721	\$814	\$994	\$981	\$786	\$733	\$784	\$769	<b>\$9,936</b>
<b>Solar+Bat</b>	\$292	\$175	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$298	\$270	<b>\$1,579</b>
<b>Saving</b>	\$571	\$650	\$748	\$782	\$653	\$746	\$926	\$913	\$718	\$665	\$486	\$499	<b>\$8,357</b>

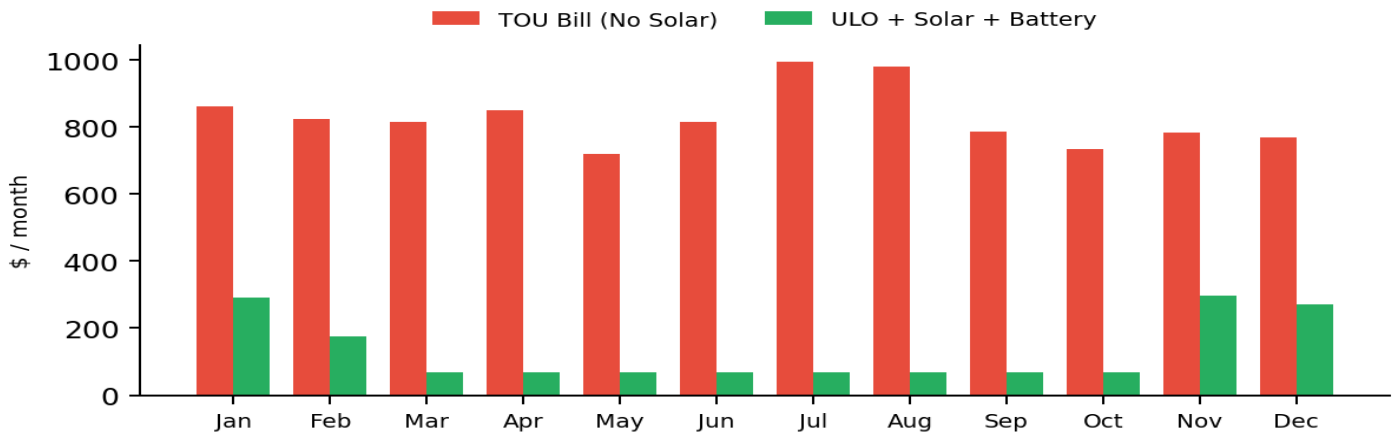
Option B (60 kWh) configuration shown. Net annual bill: \$1,579/yr. Larger batteries reduce winter bills further — see Battery Sizing page.



## Energy Analysis & Monthly Detail

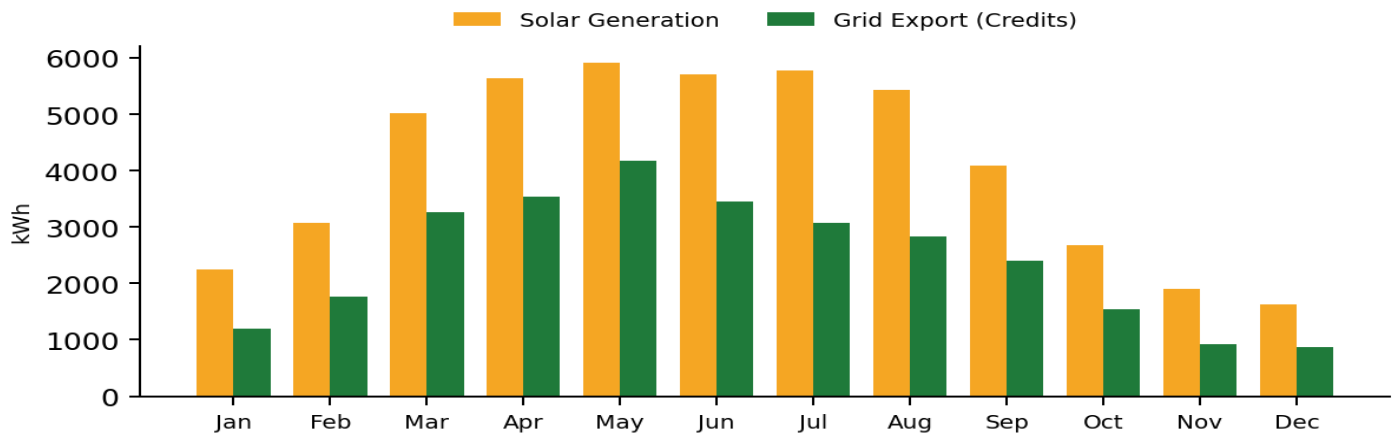
### Monthly Bill Comparison — Battery Option B Configuration

Based on recommended Battery Option B configuration — larger batteries accumulate more credits, reducing winter bills further



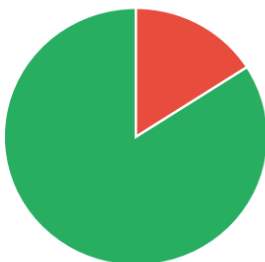
Annual TOU Bill: \$9,936 | Annual Solar+Battery Net: \$1,579 | Annual Savings: \$8,357

### Energy Production & Grid Export — Battery Option B Configuration



All pie charts based on recommended Battery Option B configuration

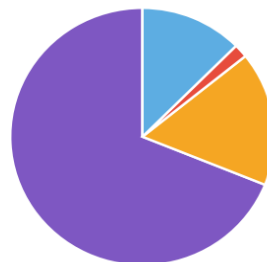
ULO+Solar+Battery vs TOU



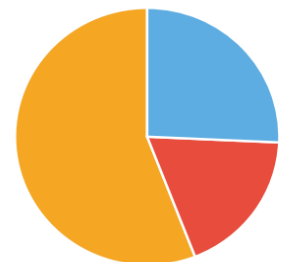
Annual Energy Mix



Grid Import by ULO Tariff



Export by ULO Tariff





## Battery Sizing: Eliminating Winter Bills

Your solar array generates surplus credits in the spring, summer, and fall — but production drops in winter. A properly sized battery banks enough credits during high-production months to fully offset winter consumption, bringing every month down to the \$68 minimum bill floor.

### MONTHLY NET BILL BY BATTERY SIZE (SAMPLE HOURLY CONSUMPTION DATA)

Config	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
No Solar	\$863	\$825	\$816	\$850	\$721	\$814	\$994	\$981	\$786	\$733	\$784	\$769	\$9,936
A (40)	\$427	\$313	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$197	\$417	\$403	\$2,233
B (60)	\$292	\$175	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$298	\$270	\$1,579
2x A	\$188	\$107	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$211	\$159	\$1,209
2xB	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$820
C (210)	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$68	\$820

Red cells = months where solar credits don't fully cover consumption. Green (\$68) = minimum bill floor (fixed charges only). Consumption, rates, and battery dispatch use sample hourly interval data. Solar production is estimated from satellite irradiance for an Ontario site.

### ANNUAL SAVINGS BY BATTERY SIZE



#### The 2x Option B is the breakeven battery size.

With 96 kWh of usable storage, the 2x Option B dispatches enough during on-peak hours (4–9pm) to generate surplus credits all spring, summer, and fall — fully covering winter consumption with zero shortfall.

Option C (210) also hits the floor, but costs the same with no additional bill savings — only more backup capacity.

### WINTER SHORTFALL: WHAT EACH BATTERY LEAVES UNPAID

Config	Usable kWh	Jan	Feb	Nov	Dec	Winter Excess Cost
Option A (40)	32 kWh	\$427	\$313	\$417	\$403	+\$1,288/yr above floor
Option B (60)	48 kWh	\$292	\$175	\$298	\$270	+\$763/yr above floor
2x Option A	64 kWh	\$188	\$107	\$211	\$159	+\$393/yr above floor
2x Option B	96 kWh	\$68	\$68	\$68	\$68	\$0 — fully covered
Option C (210)	170 kWh	\$68	\$68	\$68	\$68	\$0 — fully covered



## Head-to-Head: Option B (60) vs 2x Option A

Metric	Option B (60 kWh)	2x Option A (80 kWh)	Difference
Battery Capacity	60 kWh total	80 kWh total	+20 kWh
Usable (80% DoD)	48 kWh	64 kWh	+16 kWh
On-Peak Dispatch Rate	9.6 kWh/hr	12.8 kWh/hr	+3.2 kWh/hr
Gross System Cost	\$221,997	\$250,237	\$28,240
Effective Net Cost*	\$104,172	\$117,533	\$13,361
Annual Savings	\$8,357	\$8,727	+\$370
Annual Net Bill	\$1,579	\$1,209	-\$370
Payback (vs eff. cost)	10.8 yrs	11.5 yrs	+0.7 yrs
25-Year Net Benefit	\$147,381	\$142,502	-\$4,879
ROI (vs eff. cost)	107%	92%	-15%

\*Effective Net Cost = Net after ITC + HST reclaim, minus NPV of CCA Class 43.1 depreciation tax savings (26.5% rate, 5% discount).

### Analysis

The 2x Option A saves \$370/yr more than Option B (\$8,727 vs \$8,357) due to a larger battery dispatching more during peak hours and generating additional export credits that reduce winter bills.

After CCA depreciation, the Option B effective cost is \$104,172 vs \$117,533 for 2x Option A — a \$13,361 gap. The extra \$370/yr saving takes 36 years to close that gap. Option B pays back in 10.8 years.

**Recommendation:** Option B (60 kWh) is the better financial choice (107% ROI, 10.8 yr payback, \$147,381 net).

Choose 2x Option A only if reduced winter bills (\$1,209/yr vs \$1,579/yr) or more backup capacity justifies the premium.

### Key Insight: Battery Size Affects Winter Bills — But ROI Favours Option B

Larger batteries dispatch more during peak and generate more export credits, reducing winter bills (\$2,233→\$1,579→\$1,209→\$820/yr).

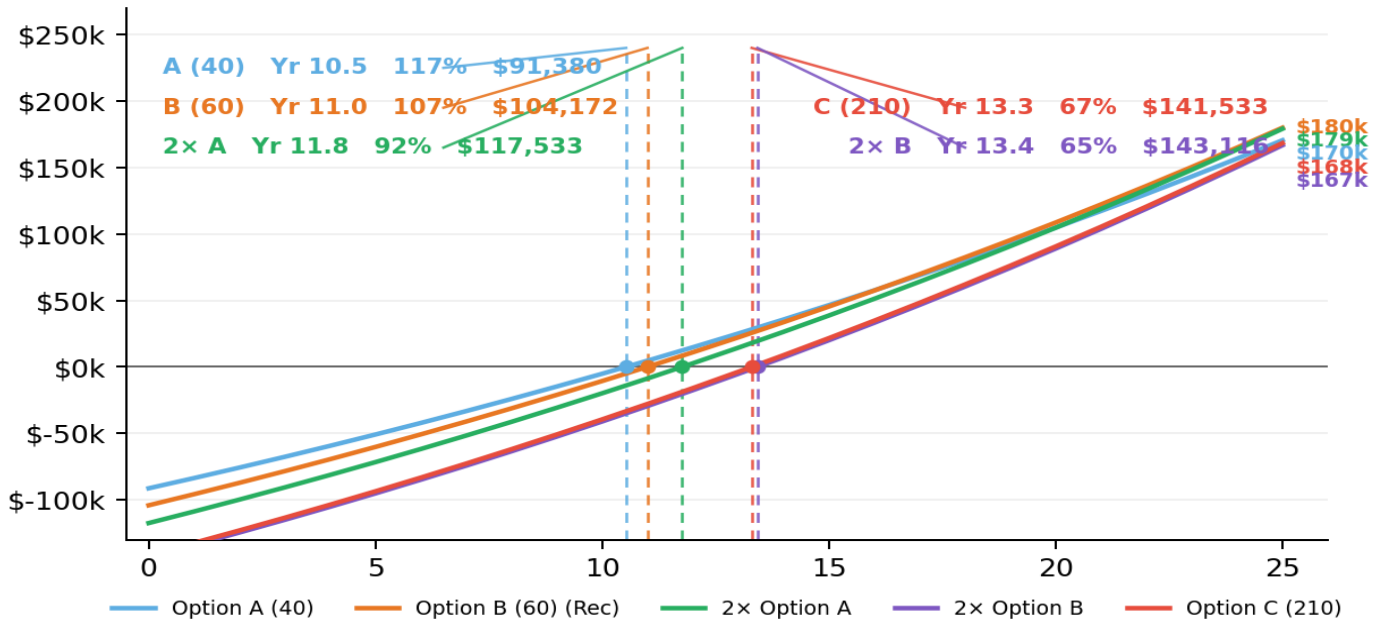
After CCA depreciation, the Option B effective cost is \$98,095 — payback in 10.4 years with \$156,482 net benefit (122% ROI).

For zero winter bills, 2x Option B is the breakeven size — see Battery Sizing page for the full monthly breakdown.



## 25-Year Financial Projection

Cumulative Net Benefit — 25-Year Projection



Per-config savings from 8,760-hr simulation (3% rate escalation, 0.5% panel degradation). Dashed verticals mark each option's payback year. ROI = 25-year net benefit / net cost.

### 25-YEAR CASHFLOW — RECOMMENDED OPTION B (60 KWH) — NET COST \$128,421

Year	Annual Saving	Cumulative	Net Position
1	\$8,357	\$8,357	-\$95,815
5	\$9,219	\$43,915	-\$60,257
10	\$10,423	\$93,563	-\$10,609
11	\$10,682	\$104,245	<b>\$73 PAYBACK</b>
12	\$10,947	\$115,192	\$11,020
13	\$11,220	\$126,412	\$22,240
15	\$11,784	\$149,694	\$45,522
20	\$13,323	\$213,156	\$108,984
25	\$15,063	\$284,904	\$180,732
<b>TOTAL</b>	<b>\$284,902</b>		<b>\$186,807</b>



# HONEY BEE SOLAR

Commercial Energy Solutions

## CCA Tax Depreciation Benefit

CRA Capital Cost Allowance — Class 43.1 (Clean Energy)

### CRA DEPRECIATION RULES (CLASS 43.1)

<b>CCA Class:</b>	43.1 — Clean Energy Generation	<b>Method:</b>	30% Declining Balance
<b>First-Year CCA:</b>	55% of cost (All 2026–27)	<b>Tax Rate:</b>	26.5% (Fed 15% + ON 11.5%)
<b>ITC Effect:</b>	30% ITC reduces depreciable pool	<b>Eligible:</b>	Solar PV, battery, inverters

### YEAR-BY-YEAR DEPRECIATION — OPTION B (60 KWH) RECOMMENDED

Year	Opening UCC	CCA Deduction	Tax Saving	Closing UCC	Cumul. Tax Savings
1	\$137,520	\$75,636	\$20,044	\$61,884	\$20,044
2	\$61,884	\$18,565	\$4,920	\$43,319	\$24,963
3	\$43,319	\$12,996	\$3,444	\$30,323	\$28,407
4	\$30,323	\$9,097	\$2,411	\$21,226	\$30,818
5	\$21,226	\$6,368	\$1,687	\$14,858	\$32,505
...					
10	\$3,567	\$1,070	\$284	\$2,497	\$35,781
15	\$600	\$180	\$48	\$420	\$36,332
20	\$101	\$30	\$8	\$71	\$36,424
25	\$17	\$5	\$1	\$12	\$36,440
<b>TOTAL</b>		<b>\$137,520</b>	<b>\$36,440</b>		<b>\$36,440</b>

NPV of 25-Year Tax Savings (at 5% discount rate): **\$32,476**

### TRUE NET INVESTMENT AFTER ALL TAX BENEFITS

Gross System Cost (incl. HST)	\$221,997
Less: HST Reclaim (Corporate)	-\$25,539
Less: Federal ITC (30% pre-tax)	-\$58,937
<b>Net Cost After ITC + HST</b>	<b>\$137,521</b>
Less: NPV of CCA Tax Savings	-\$32,476
<b>Effective Net Investment</b>	<b>\$105,045</b>



## Assumptions & Methodology

### KEY ASSUMPTIONS

<b>Rate Escalation:</b>	3.0% per year	<b>Panel Degradation:</b>	0.5% per year
<b>Battery Efficiency:</b>	90% round-trip	<b>Min SOC:</b>	20% (80% usable DoD)
<b>Dispatch Window:</b>	4pm–9pm weekdays (5 hrs)	<b>Charge Window:</b>	11pm–7am (ULO overnight)
<b>ITC:</b>	30% on pre-tax cost (corporate)	<b>HST Reclaim:</b>	Full HST recovery (corporate)
<b>Analysis Period:</b>	25 years	<b>Billing:</b>	Local Utility R2 Medium Year-Round
<b>On-Peak Rate:</b>	\$0.391/kWh	<b>ULO Overnight Rate:</b>	\$0.039/kWh
<b>Min Monthly Bill:</b>	\$68.32 (fixed charges)	<b>Export Credit:</b>	ULO rate + delivery per kWh
<b>Credit Expiry:</b>	12 months (O. Reg. 541/05)	<b>Credit Scope:</b>	Electricity + delivery volumetric
<b>CCA Class:</b>	43.1 — 30% declining balance	<b>First-Year CCA:</b>	55% (All 2026–27 phase-out)

### Methodology

Analysis based on 8,760-hour simulation using historical consumption data and satellite irradiance for a representative Ontario site. ULO rate structure: Ultra-Low Overnight 3.9¢/kWh (11pm–7am daily), Weekend Off-Peak 9.8¢/kWh, Mid-Peak 15.7¢/kWh (7am–4pm & 9pm–11pm weekdays), On-Peak 39.1¢/kWh (4pm–9pm weekdays). Battery dispatch: even drain from 100% to 20% SOC across 5 on-peak hours. Overnight charging at 3.9¢/kWh with 90% round-trip efficiency. Local Utility R2 Medium Year-Round delivery: \$79.03/mo fixed + transmission/regulatory per kWh. Export credits per Ontario Net Metering (O. Reg. 541/05) include electricity commodity + delivery volumetric charges (distribution, transmission, regulatory). Credits expire after 12 months per OEB rules — excess credits that remain undrawn for 12 consecutive months are forfeited.

Annual bill varies by battery size (\$2,233→\$820/yr). Larger batteries dispatch more, generating additional credits. Banked credits carry forward monthly. Corporate ITC at 30% of pre-tax cost with HST reclaim. Rate escalation: 3%/yr. Panel degradation: 0.5%/yr.

### Disclaimer

*This sample report is provided for informational and demonstration purposes only and does not constitute a guarantee of performance or financial returns. Actual savings will vary based on weather, consumption patterns, rate changes, and equipment performance. Financial projections are estimates only and do not constitute financial advice. Consult with a qualified financial advisor before making investment decisions. All figures are illustrative examples. All costs include applicable HST. Corporate ITC and HST reclaim assume eligible corporate entity structure.*



# HONEY BEE SOLAR

Commercial Energy Solutions

## Installation Quote

Recommended Configuration: Option B (60 kWh)

### EQUIPMENT & MATERIALS

Description	Qty	Unit Price	Extended
Solar Panels — Premium Solar Module (620W)	64	\$300	\$19,200
Hybrid Inverter — Hybrid Inverter ABC (30 kW 3-Phase)	1	\$22,000	\$22,000
Battery — Battery Model B (60 kWh LiFePO4)	1	\$70,000	\$70,000
RSD (String) — RSD Module	2	\$800	\$1,600
Racking & Mounting Hardware (Roof Mount)	1	\$12,500	\$12,500
Balance of System (Wiring, Disconnects, Breakers)	1	\$12,500	\$12,500
Monitoring System (Cloud Platform + CT Sensors)	1	\$3,000	\$3,000
<b>Equipment Subtotal</b>			<b>\$140,800</b>

### LABOUR & SERVICES

Installation Labour (Crew, 5–7 days)		\$24,500
Battery Installation & Configuration		\$2,000
Engineering, Design & Permits		\$3,000
Shipping & Logistics		\$3,000
<b>Labour &amp; Services Subtotal</b>		<b>\$32,500</b>

### >12KW REGULATORY & ENGINEERING COSTS

Electrical Engineering Report (>12kW) — estimate, ±50%		\$15,000
Connection Impact Assessment — CIA (Local Utility)		\$6,000
Local Utility Application & Connection Fee (estimate)		\$900
ESA Inspection & Approval (estimate)		\$1,200
<b>&gt;12kW Regulatory Subtotal (pass-through at cost — estimates subject to change)</b>		<b>\$23,100</b>

### PRICING SUMMARY

Subtotal (before tax)		\$196,400
HST (13%)		\$25,500
<b>Total Project Cost (incl HST)</b>		<b>\$222,000</b>
Federal ITC Credit (30% of pre-tax cost)		-\$58,900
HST Reclaim (Corporate)		-\$25,500

### NET CLIENT INVESTMENT

**\$137,500**

After CCA Class 43.1 Depreciation (NPV of 25-year tax savings):

**Effective Net Cost: \$104,000**

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Client Signature & Date

Quote valid 30 days. ITC (30%) on pre-tax cost for eligible corporate entities. HST reclaim for registered corporate clients. 5–7 business days install. All figures shown are sample/illustrative values.